

# Chapter 1

## Introduction

The Kentucky Education Reform Act (KERA) of 1990 formed the basis for massive change to the state's educational system. This landmark reform was enacted by the Kentucky General Assembly in response to a successful lawsuit against the General Assembly, the governor, the Kentucky Board of Education, and the chief state school officer brought by the Coalition for Better Education (CBE) which represented 66 of the state's 176 districts. The courts found the state's funding mechanism inequitable and mandated that the educational system be redesigned. One of the most comprehensive, statewide restructuring efforts ever attempted in the United States, the reform called for top-down and bottom-up systemic change in finance, governance, curriculum and assessment.

KERA established six goals for the schools of the Commonwealth.

<b>Table 1.1 Kentucky School Goals</b>	
Goal 1	Expect a high level of achievement of all students.
Goal 2	Develop student's abilities in six cognitive areas.
Goal 3	Increase school attendance rates.
Goal 4	Reduce dropout and retention rates.
Goal 5	Reduce physical and mental health barriers to learning.
Goal 6	Increase the proportion of students who make a successful transition to work, postsecondary education, and the military.

Through a two-year period of public input and review, 75 valued outcomes or performance goals were produced. The State Board of Education approved these in December of 1991. Concerns arose about the measurability of learner goals three and four (see Table 2.1), and complaints were made about the obscurity of the wording of the valued outcomes. These concerns led to the revision and reduction of the valued outcomes to 57 in number. These were presented to the Kentucky State Board of Education on May 3-4, 1994. Since that time, they have been known as the Academic Expectations.

Additionally an assessment system was established. In 1992 the Kentucky Instructional Results Information System (KIRIS) was developed to measure progress toward the goals, primarily the expectations reflected in the first two goals of the act, and the non-cognitive goals outlined in goals 3, 4 and 6.

Furthermore, legislation, (House Bill 53) passed in spring of 1998, directed the Kentucky Board of Education to redesign the assessment and accountability system. Through a broad and collaborative process involving educators and citizens of Kentucky, the Commonwealth Accountability Testing System (CATS) resulted. Many changes were made in this new system first administered in the spring of 1999. The changes were made in order to improve the reliability and validity of the test, reduce testing time and make the system fairer and easier to understand. Those changes include, but are not limited to:

- Distributing the test components for the high school from primarily the junior year to across three grade levels; reading and practical living/vocational studies in grade 10, math, science, social studies and arts and humanities in grade 11 and writing on demand and writing portfolios both in grade 12;
- Reducing the contents of the portfolio in each accountability year – grade four from 6 to 4 pieces, grade 7 and 12 from 6 to 5 pieces; also creating a regulation that directs instructional use, editing and scoring of the portfolio;
- Limiting the student to answers on the open response to the space provided – one 8 ½” x 11” sheet;
- Counting multiple-choice questions on the Kentucky Core Content Tests and weighting them 33% of the score and the open response at 67% of the academic index;
- Giving schools incremental credit for novice and apprentice growth in reading, math, science and social studies: nonperformance is 0 points, medium novice is 13, high novice is 26, low apprentice is 40, medium apprentice is 60, high apprentice is 80, while proficient remains 100 and distinguished at 140. For writing, arts and humanities and practical living/vocational studies the nonperformance will be 0, a novice will receive 13 points and each apprentice will receive 60 points while proficient and distinguished are 100 and 140, respectively.
- Reducing the testing window from 3 weeks to 2 weeks.

House Bill 53 shaped Kentucky’s assessment and accountability through several provisions that outline general features of a system of testing and biennial school accountability, leaving many details of implementation to various committees that were enacted by the bill.

The School Curriculum, Assessment, and Accountability Council (SCAAC) was created by House Bill 53 to study, review, and make recommendations concerning Kentucky's system of setting academic standards, assessing learning, holding schools accountable for learning, and assisting schools to improve their performance. The council advises the Kentucky Board of Education (KBE) and the Legislative Research Commission (LRC) on issues related to the development and communication of the academic expectations and core content for assessment, the development and implementation of the statewide assessment and accountability program, the distribution of rewards and imposition of sanctions, and assistance for schools to improve their performance.

The School Curriculum, Assessment, and Accountability Council are composed of seventeen (17) voting members appointed by the Governor. The appointments are made to assure broad geographical representation and representation of elementary, middle, and secondary school levels, as well as equal representation of the two sexes, inasmuch as possible, and to assure that appointments reflect the minority racial composition of the Commonwealth.

Under House Bill 53, the Legislative Research Commission (LRC) appointed a National Technical Advisory Panel on Assessment and Accountability (NTAPAA), which must be composed of no fewer than three (3) professionals with a variety of expertise in education testing

and measurement. The panel advises LRC, and upon approval of the director of the Commission, the Kentucky Board of Education and the Department of Education.

## **Interim Accountability Model In 1999 & 2000**

Because of these major changes in the system, comparisons between KIRIS and the Commonwealth Accountability Testing System are not appropriate. Words like ‘gain’, ‘growth’, ‘improvement’, or ‘decline’ are not appropriate ways to describe the difference between 1996–98 scores on KIRIS and the 1999 Kentucky Core Content Tests results of the Commonwealth Accountability Testing System. Because of this lack of ability to compare the two tests, neither the old nor the new long-term accountability models are appropriate for determining rewards and assistance in the year 2000. The National Technical Panel for Assessment and Accountability (NTAPAA) has advised the State Board of Education to use a regression-based model using 1997 and 1998 KIRIS data to predict 1999 and 2000 performance.

The state board selected the model after months of discussion and upon the recommendation of the National Technical Advisory Panel for Assessment and Accountability. The panel, which has advised the board on various technical aspects of developing the new testing system, characterized the model as statistically sound and offering Kentucky the ability to compare results during the transition biennium (1999 and 2000) between the state's old testing system and the new testing system.

## **Purpose**

The purpose of this technical report is to provide information about the technical characteristics of the interim accountability system of the Commonwealth Accountability Testing System (CATS), the new assessment component of the Kentucky Education Reform Act (KERA). A secondary purpose is to track the changes that have occurred to the system during the time span covered by this report. The time period under consideration is the Interim Accountability Cycle (2000), which spanned the four school years 1997 through 2000. While some parts of this report are accessible to everyone, its intended audience is experts in psychometrics and educational research. This report is best understood with a working knowledge of measurement concepts such as reliability and validity, and statistical concepts such as correlation and central tendency. For some chapters, the reader is presumed to have basic familiarity with advanced topics in measurement and statistics such as item response theory and factor analysis.

## **Test Reliability and Validity**

This Technical Report provides extensive detail about the development and operation of the Kentucky Core Content Tests. The traditional concerns with a program are often labeled reliability and validity. The empirical reliability of the assessments is reported explicitly in this document. However, validity is not addressed as a separate topic for two reasons. One is that the validity of the program is being assessed by others. The second reason is that the validity of a program such as this derives from the sum of its parts. The steps in creating the program and

putting it into operation are all aspects of validity. The validity of any assessment stems from the steps taken in planning it. The processes of developing the content of the tests, the processes of consulting with stakeholders, the processes of communicating about the test to users, the processes of scoring and reporting, and the processes of data analysis are all inherent parts of validity. The uses made of the test results as established by the Kentucky Board of Education are also aspects of validity. In short, this document provides much but not all of the evidence needed to assess the validity of the program.

## **Not Just a Test**

In reading this technical report, it is critical to remember that the testing program does not exist in a vacuum. It is one part of a complex network intended to help schools focus their energies on dramatic improvement in student learning. That is, the Commonwealth Accountability Testing System (CATS) is part of an integrated program of testing, accountability, and curricular and instructional support, coupled with wide-sweeping changes in school finance, governance, and organization. It can only be evaluated properly in this full context.